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# JUSTIFICATION FOR NON-COMPETITIVE PROCUREMENT

Preparation o	ETE THIS SECTION IF NEW CONTRACT (s) in this request, answer applicable questions in each of the 4 major subject of Non-Competitive Procurement Form on the reverse side.	t areas below in accordance with the Instructions for
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supporting doc	e. Indicate both the original and the adjusted contract amount and/or expirat ocuments. Request approval for a contract amendment or modification to the	
Con	ntract #: 12222 Company or A	6.
Spec	cification #: 48684	y Name: ARGONNE NATIONAL LAB.
Mod	cification #: 48684 Contract or Program d. #: (Attach List, if multiple)	n Description: C. HICAGO - PROTECT PILOT PROC
Originator	Name Telephone Simulation	Department 7/18/0
	Telephone Signature	Department Date
indicate SEE A	ATTACHED in each box below if additional space needed:	540
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# JUSTIFICATION FOR NON-COMPETITIVE PROCUREMENT (Attachment)

#### 1. Procurement History

Since the horrific occurrence of September 11, 2001, the country is forever looking at ways to protect American's and minimize the risk of another 9/11.

The City is in the process on installing an early warning monitoring system that will detect various chemical contaminants. At this time, the program will focus on publicly accessible city facilities (city hall, pedway, and CTA).

#### 2. Estimated Cost for Extension

\$290,000.00

#### 3. Scheduled Requirements

- Task 1. Detailed Site Survey and Plan
- Task 2. Detector Background Environment Testing
- Task 3. Equipment and System Bench Testing
- Task 4. Customization of Command and Control Software
- Task 5. Installation and Shakedown of System
- Task 6. Concept of Operations

### 4. Exclusive or Unique Capability

The command and control software is propriety and unique to Argonne National Laboratory (ANL). This is the only entity to our knowledge that is providing this type of services to cities throughout the United States. ANL has installed early warning monitoring systems in Washington DC, New York City, and Boston. They are also installing such systems with Amtrak at Penn Station in New York; 30<sup>th</sup> St. Station in Philadelphia; Union Station in Washington, DC; and Union Station in Chicago. ANL has unique expertise in the command and control software associated with the system as well as the chemical sensor packages (i.e. monitors).

ANL is operated by the University of Chicago under contract with the U.S. Department of Energy.

For DPS U	se Only
Date Received	Bertheller Ba
Date Returned	
Date Accepted	
CA/CN's Name	
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IMPORTANT: PLEASE READ AND FOLLOW THE INSTRUCTIONS FOR COMPLETING THE PROJECT CHECKLIST AND CONTACT THE APPROPRIATE UNIT MANAGER IF YOU HAVE ANY FURTHER QUESTIONS. ALL INFORMATION SHOULD BE COMPLETED, ATTACH ALL REQUIRED MATERIALS AND SUBMIT FOR HANDLING TO THE DEPARTMENT OF PROCUREMENT SERVICES, ROOM 403, CITY HALL, 121 N. LASALLE STREET, CHICAGO, ILLINOIS 60602.

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### ARCHITECTURAL/ENGINEERING SUPPLEMENTAL CHECKLIST

deliverables, and other information	Services, including location, description of project, services required, as required
If applicable, Pre-Qualification Ca For Pre-Qualification Program, atta	O feet of CTA train or other railroad property?  Par a waterway?  Index of State Sta
AVIATIO	N CONSTRUCTION SUPPLEMENTAL CHECKLIST
DOA sign-off for final design docum Required Attachments:	ents: ☐Yes ☐ No
Copy of Draft Contract Documents a Risk Management:	and Detailed Specifications.
Current Insurance Requirements pr Will work be performed within 50 fee Will work be performed airside? Ye	epared/approved by Risk Management: Yes  No  et of CTA or ATS structure or property? Yes  No  occurred No  oc
	MMODITIES SUPPLEMENTAL CHECKLIST
contract term and extension options	specifications (Scope of Services) including detailed description of the rtment contact, price escalation considerations, Bidder's qualification, Contractor's qualifications, citation of any applicable City/State/Federal y applicable technical standards and Price Lists/Catalogs, technical drawings as appropriate.
If Modification request, please veri	fy and provide the following:
Contractor's Name: Chie	cago Manufacturing Center
Contractor's Address: 247	S. State, St. Suite 1000
Chic	ago, IL 60604
Contractor's e-mail Address: track	nuy@cmcusa.org
Contractor's Phone Number: 312/	542-0431
Contractor's Contact Person: Tina	Rachuy
CON	STRUCTION SUPPLEMENTAL CHECKLIST
KISK Management	tract Documents and Detailed Specifications  eet of CTA train or other railroad property?

#### VEHICLES/HEAVY EQUIPMENT SUPPLEMENTAL CHECKLIST

<ul> <li>Detailed Specifications including detailed descrifications, and options/accessories.</li> <li>Special Provisions (Delivery, Warranty, Manuals Bid Submittal Information, etc.)</li> <li>Delivery Location(s)</li> <li>Technical Literature</li> <li>Drawings, if any</li> </ul>			
<ul> <li>☐ Part Number List ( Manufacturer; or</li> <li>☐ Current Price List(s)/Catalog(s)</li> <li>☐ Special Approval Form</li> <li>☐ Exhibits and Attachments</li> </ul>	Dealer;	or Other Source:	)
If Modification request, please verify and provide t	the following:		
Contractor's Name:		·	
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Contractor's e-mail Address:			
Contractor's Phone Number:			
Contractor's Contact Person:			
PROFESSIONAL SERVIC	ES SUPPLEM	ENTAL CHECKLIS	Т
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<ul> <li>☐ The Schedule of Compensation</li> <li>☐ Deliverables</li> <li>☐ Request for individual contract services (if applica</li> <li>☐ The appropriate EPS form</li> <li>☐ ITSC (approved by BIS)</li> <li>☐ OBM (approved by Budget form/memo)</li> </ul>	rchase activity		
The Schedule of Compensation Deliverables Request for individual contract services (if application The appropriate EPS form ITSC (approved by BIS) OBM (approved by Budget form/memo) Grant document attached Attach any documentation indicating any previous put  TELECOMMUNICATIONS AND L  Required Attachments: Detailed Scope of Services and products the user department wants provided, incorpospective vendors, special requirements or needs of departments, citation of any applicable City ordinance Has the project been reviewed by BIS?  Attach copy of BIS Recommendation; Reservation(s);	rchase activity  ITILITIES SUP  Solution of the project, lot or state/federates   or participate of participate of the project   or participate   or partici	PLEMENTAL CHECONNICH SETS FOR THE PLAN IN A STATE OF THE PLAN IN A S	CKLIST  f the anticipated services special qualifications of participating user te.

Form Dated 04/24/2007

#### WORK SERVICES/FACILITY MAINTENANCE SUPPLEMENTAL CHECKLIST

Required Attachments: Detailed Specifications (Scope of Services) including detailed description of the work, locations (with supporting detail), user department contacts, work hours/days, laborer/supervisor mix, compensation and price escalation considerations, Bidder's qualification, contract term and extension options, Contractor's qualifications, citation of any applicable City/State/Federal statutes or regulations, citation of any applicable technical standards and Price Lists/Catalogs, technical drawings and other exhibits and attachments as appropriate.

Risk Management:		
Will services be performed within 50 feet (50') of CTA train or other railroad property?	□Yes	□No
Will services be performed on or near a waterway?	□Yes	□No
Will services require the handling of hazardous/bio-waste material?	∐Yes	□No
Will services require the blocking of streets or sidewalks which may affect public safety?	□Yes	□No
If Modification or Amendment request, please verify and provide the following:		
Contractor's Name:		
Contractor's Address:		
Contractor's e-mail Address:		
Contractor's Phone Number:		
Contractor's Contact Person		

#### P-06105 Revision 1

# CHICAGO - PROTECT PILOT PROGRAM Revision 1

# Work proposed by:

Argonne National Laboratory
Decision and Information Sciences Division
9700 South Cass Avenue
Argonne, IL 60439

# Principal Investigators:

Patrick L. Wilkey (630) 252-6258 - Phone (630) 252-3379 - Fax

Gordon Lurie (630) 252-4984 - Phone (630) 252-3379 - Fax

#### Submitted to:

Kevin Schnoes, P.G.
Assistant Commissioner
Department of Environment
Permitting & Enforcement Division
30 North LaSalle, 25th Floor
Chicago, IL 60602
kschnoes@cityofchicago.org
(312) 744-4034 - Phone

(312) 744-5272 - Fax

June 2006

## CHICAGO-PROTECT PILOT PROGRAM

P.L. Wilkey and G.R. Lurie, Argonne National Laboratory

#### INTRODUCTION

The City of Chicago is concerned with protecting "hot spots" in the city that may be subject to chemical and other terrorist attacks that could lead to mass casualties and disruption of the city's economy. The ability to save lives and recover rapidly from such attacks depends on the city's ability to quickly recognize attacks and, in the case of chemical attacks, to rapidly limit the extent of their spread.

The PROTECT system is an early warning crisis management system with dual uses. First, the system permits rapid identification of an attack by using chemical detectors to detect hazardous chemicals and then visually verifying the attack through the use of video cameras. Second, routine law enforcement can use the system (through the video cameras) to monitor and respond to any criminal activity, fire and smoke incidents, and forensic evaluation in case of accidents, hostage situations, etc.

The PROTECT system is in operation in the Washington, DC subway, a large transportation terminal in Boston, and a large transportation terminal in New York City. Amtrak has funding to add PROTECT to two large terminals it operates in major cities and will eventually complete the PROTECT system for four large terminals in four major cities.

Under the original proposal Argonne provided a pilot of the PROTECT system modified to meet the specific requirements in the Daley Center. The system was integrated into the OEMC. This revision expands the system to the Pedway and the connected Blue line subway station.

# THE CHICAGO-PROTECT SYSTEM PILOT

The Pedway that links the Daley Center and the CTA subway is an area of concern because of the large number of people that pass through it daily, specifically during rush hours. That area would be monitored at the junction points of pedway sections with a chemical detector suite supported by pan-tilt-zoom cameras to visually monitor the detector area and the pedway sections between detectors. Wireless communications could be used to send video camera and detector data to a hub, which would be on a network to (1) an existing security station in the Daley Center and (2) the Office of Emergency Management and Communications (OEMC). A concept of operations (ConOps) plan would be set up to provide optimal response to a detector activation of an incident in that pedway section.

The command and control system installed with the original pilot links the following locations: a security station in the Daley Center, a monitoring station at the OEMC, a service and maintenance station at Argonne National Laboratory to diagnose any problems with the detectors, and a station at video contractor's headquarters to remotely diagnose and correct any

video problems. The remote access to the system (with appropriate security protections) greatly reduces maintenance costs.

#### STATEMENT OF WORK

The following tasks will be accomplished to expand the working pilot system to the Pedway and Blue line station.

### Task 1: Detailed Site Survey and Plan

The Argonne and the video contractor team would design the PROTECT system in detail and provide conceptual drawings of the expanded system to the City of Chicago for review. The creation of the system would be the result of a team effort, including Chicago law enforcement, OEMC staff, city staff, and Daley Center staff. The design plan would be prepared and reviewed by city stakeholders.

## Task 2: Detector Background Environment Testing

While other work continues, one detector would be placed in the pedway for two months to identify any background chemicals that could be interferents and could cause detector activations in that area. System planning would be performed to adjust for or counteract those incidents.

# Task 3: Equipment Purchase and Benchtesting of System

The supporting detectors, computers, and video camera support system equipment would be purchased and set up in a bench testing lab to be checked before installation in Chicago.

# Task 4: Customization of Command and Control Software

The PROTECT CB-EMIS software would be updated to handle the additional detectors and video cameras in the geometry for the expanded program in Chicago. The video software system would be set up by the video contractor and checked out with the Argonne detectors and command and control system. A variety of scenarios would be run to ensure the software is working well before installation in Chicago. The City of Chicago will provide electrical and communication lines for the expanded system to connect to the pilot server in Daley Center.

# Task 5: Installation and Shakedown of the System

The Argonne and the video contractor team would install the expanded system and carry out testing for a three-month period. The output of the PROTECT system would go to a security station in the Daley Center as well as to the OEMC in Chicago.

#### Task 6: Concept of Operations

Argonne and the video contractor staff would work with Daley Center security, OEMC staff, and City of Chicago staff to develop a ConOps plan for the expanded system. The ConOps plan would also be implemented in the CB-EMIS software.

#### Task 7: System Training

Classes would be held with all users of the expanded system including CTA and others as designated by the City if Chicago to explain the system and how to use it effectively. Training scenarios would be prepared for practice, and a short reminder instruction card would be prepared for the users.

#### Task 8: Nagios System Monitoring

The Argonne system monitoring program would be customized so that Argonne and a video contractor could be alerted to any system issues at the time they occur. A VPN between the OEMC and Argonne and the video contractor would be set up to alert Argonne to such problems through remote access. This plan assumes that the OEMC would give permission for a VPN.

## EQUIPMENT REQUIRED FOR THE PILOT SYSTEM

The following equipment is projected for the expanded program:

- a. Two detector units covering chemical agents and at least three toxic industrial chemicals (TICs) considered as threats in terrorist attacks (\$135K, including overhead cost of purchase).
- b. Four closed-circuit television (CCTV) video cameras with pan-tilt-zoom capability with high-resolution color that can focus on the pilot segment of the pedway between the Daley Center and the subway (\$75K, including overhead cost of purchase).
- c. implemented if a network connection can be reached from aboveground at or near the pedway segment (\$15K, including overhead cost of purchase).
- d. VPN software and hardware to allow connections from the OEMC to Argonne and the video contractor to monitor the system remotely and make any adjustments from our home stations (\$4K, including overhead cost of purchase).

#### ANNUAL MAINTENANCE

The incremental cost of annual maintenance is about \$25K, which covers emergency service and daily monitoring of the system for problems. As the system is expanded over time, the cost would decline as a percentage of design and installation costs. Maintenance would start at the time the City of Chicago accepts the system. Acceptance is assumed to occur two months after (due to shakedown) the four-month installation period, or six months from the start of the project.

# **BUDGET AND DELIVERABLES DATES**

Table 1 lists the costs of design and construction of the system. The time for design and installation would be about four months from the time the contract begins. Shakedown would be for two months after installation at which time the City of Chicago would be expected to accept the system.

#### THE PROTECT TEAM

The PROTECT system was developed by Argonne National Laboratory in cooperation with a subcontractor for the video portion of the system. The PROTECT system was funded by Department of Energy, Federal Transit Administration, National Institute of Justice, and the Offices of Science and Technology and the Office for Domestic Preparedness of Department of Homeland Security. The PROTECT system has been in operation for three years in the Washington, DC subway, covering numerous underground stations. It also is in a large transportation terminal in Boston and one in New York City. It has been operating for about 18 months at each site. Further, Amtrak is funding efforts to get PROTECT at four large terminals in four major cities in which it operates.

The team has a unique capability, as no other organizations have designed and installed a PROTECT system or any PROTECT-like system anywhere in the world.

# WORKING WITH ARGONNE NATIONAL LABORATORY

Argonne National Laboratory is owned by the U.S. Government and operated under a Prime Contract by the University of Chicago as manager of the facility. The University of Chicago complies with the requirement of the U.S. Department of Energy with respect to both minority-and women-owned business enterprises and as such is not subject to the city's MBE/WBE requirements.

Area	Organization	Description	Cost (\$) <sup>a</sup>
Detectors (sensors) (2)	Argonne	Chemical sensors with TIC modules	135,000
CCTV system (4)	Video Contractor	Camera FirstView systems with 30-day storage; includes cameras, encoders, and servers.	75,000
Installation	Argonne / Video Contractor	Survey, installation of sensors, cameras and server configuration	40,000
Fraining and hakedown	Argonne / Video Contractor	System training on CB- EMIS/FirstView and on-site support during testing period	15,000
ncremental support, ervice, and naintenance	Argonne / Video Contractor	Hardware and software per year (includes next day support/remote diagnostics/monthly VPN)	25,000

<sup>&</sup>lt;sup>a</sup> Cost includes overhead cost of purchase.

# CHICAGO - PROTECT PILOT PROGRAM

P-06105 Revision 1 Phase 2

•	F۱	/2008	F	Y2009
Component	Person- Months	Cost (\$1,000)	Person- Months	Cost (\$1,000)
Direct Effort	2.6	35.5	2.5	35.3
Total Effort	2.6	35.5	3.4	35.3
Purchased Material		30.0		30.0
Subcontracts		50.0		50.0
Service Center		0.0		0.0
Other Direct Costs		0.5		0.6
Other Costs Subtotal		80.5		80.6
Total Direct Costs		116.0		115.9
Laboratory Indirect		29.0		29.0
Total ANL Cost		145.0		145.0
DOE Admin. Charge (3%)		0.0		0.0
Full-cost recovery rate		145.0		145.0

<sup>\*</sup>Costs may be rounded.

#### **CITY OF CHICAGO PRE-APPROVED MODIFICATION / OVERRIDE REQUISITION**

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LINE ITEM

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SUGGESTED VENDOR:

**BFY** 

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**FUND** 

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0722005

3 Year Time Extension from January 1, 2008 thru December 31, 2010

COST CTR

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**REQUISITION TOTAL:** 

Lynn Jackson

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